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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,236		Tomoki Suemasa	214489US2PCT	2551

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EXAMINER	
CROWELL, ANNA M	

ART UNIT	PAPER NUMBER
1763	6

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Please find below and/or attached an Office communication concerning this application or proceeding.

mk 4

Office Action Summary	Application No. 09/926,236	Applicant(s) SUEMASA, TOMOKI	
	Examiner Michelle Crowell	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. Figure 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 4 recites the limitation "*wherein the elevator mechanism moves down the lower electrode to a position* ***opposing*** *to the opening portion*" in line 2, page 18 and lines 1-2, page 19. How is the lower electrode opposing the opening portion? Clarification on the term "opposing" is needed for this claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoyasu et al. (European Patent Application 0678903A1) in view of Kawakami et al. (Japanese Patent Publication 06-333879 A).

Referring to Figures 8, 14-17, column 13, line 23-column 14, line 10, and column 16, line 47-column 17, line 33, Tomoyasu discloses a grounded, air-tight chamber 302, a susceptor 305 (lower electrode), a wafer W (object), a power supply 319, a lifter mechanism 320 (elevator mechanism) supported by a shaft 321 (driving portion), bellows (driving portion), a ring 325 (conductive wall), and a baffle plate 326 (conductive member). The lifter mechanism 320 moves the susceptor 305 up and down. The power supply 319 applies a high frequency power of 13.56 MHz (at least 10 MHz) to the susceptor 305. The baffle plate 326 includes a plurality of holes 328 to adjust the flow of gases in the process chamber 302. In addition, the baffle plate 326 divides the plasma processing space from the exhaust space.

Referring to Figures 16-17, a groove is provided in the ring 325 and the clearance 372 provides a space between lifter mechanism 320 and the ring 325.

Tomoyasu fails to teach electrically connecting an inner wall of the treatment chamber and the wall body.

Referring to the abstract, and Drawings 1 and 2, Kawakami teaches elastic member 30 which is located between the base wall 4 (inner wall) and the lifter 15 (wall body). The elastic member 30 allows the base wall 4 and the lifter 15 to be electrically connected, and therefore external noises and an abnormal discharge are prevented. Thus, it would have been obvious to

one of ordinary skill in the art at the time of the invention to provide the inner wall of the treatment chamber and the wall body of Tomoyasu with an electrical connection as taught by Kawakami. This would prevent external noises and an abnormal discharge.

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoyasu et al. (European Patent Application 0678903A1) in view of Kawakami et al. (Japanese Patent Publication 06-333879 A) as applied to claims 1, 2, and 7-10 above, and further in view of Arami et al. (U.S. 5,474,643).

Tomoyasu in view of Kawakami fail to show an opening portion in the wall body.

Referring to Figures 1 and 2a, column 3, lines 43-60, column 4, lines 27-43, lines 57-67, and column 5, lines 1-2, Arami shows electrically conductive gates 40 and 42 (conductive wall body) with an opening portion. An air cylinder 43 is provided on the gates 40 and 42 to selectively open and close the passages 36 and 38. When the gates 40 and 42 are opened, a wafer is transferred into the chamber 10 for plasma processing, Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the conductive wall body of Tomoyasu in view of Kawakami with the opening portion as taught by Arami. This would selectively open and close the wall body in order to transfer wafers for plasma processing.

8. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomoyasu et al. (European Patent Application 0678903A1) in view of Kawakami et al. (Japanese Patent Publication 06-333879 A) and Arami et al. (U.S. 5,474,643) as applied to

claims 1-4 and 7-10 above, and further in view of Washitani et al. (Japanese Patent Publication 04-240726 A).

Tomoyasu in view of Kawakami and Arami fail to teach a cover for a driving portion.

Referring to Drawings 1 and 2, and the abstract, Washitani teaches a dust proof tubes A(21), B(22), and a double tube 23 (covers). Cover 21 is connected to lifter 4 and cover 22 is connected to lifter 18. The covers 21, 22, 23 prevent a reaction product from adhering to the inner wall and bellows (driving portion) of a reacting chamber 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the elevator mechanism of Tomoyasu in view of Kawakami and Arami with the covers as taught by Washitani. This would prevent a reaction product from adhering to the inner wall and driving portion of the treatment chamber.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. ***.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Crowell whose telephone number is (703) 305-1956. The examiner can normally be reached on M-F (8:00 - 4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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January 13, 2003